Page 18, beginning at line 13, please replace the paragraph with the following:

A transistor M1 has drain and gate terminals connected to each other. I_{D1} is input to the drain terminal. The drain terminal of a transistor M2 is connected to a power supply voltage V_{DD}, and its source terminal is connected to the source terminal of the transistor M1 and grounded via a current source Io. A given power supply V_{BB} is connected to the gate terminal of the transistor M2. The current I_{D2} flowing in the drain terminal of the transistor M2 is the difference current between the current from the current source Io and the current I_{D1} (I_{D2} - Io - I_{D1}). Referring to FIG. 4, the drain terminal of the transistor M2 is connected to the power supply voltage V_{DD}. However, no problem arises even if the connection of the drain terminal changes as long as a current flows to satisfy I_{D2} = Io - I_{D1}.

A2

IN THE CLAIMS

Please amend the claims as follows:

A3

1. (Amended) A variable gain circuit comprising:

a variable gain amplifier which receives an input signal, outputs an amplified signal, and includes a first field-effect transistor;

a gain control signal compensation circuit which outputs a gain control signal for controlling a gain of said variable gain amplifier and includes a second field-effect transistor; and

a gain deviation correction circuit which is connected to the variable gain amplifier and corrects a gain deviation based on said variable gain amplifier and said gain control signal compensation circuit.

A4

~~1~~ 8. (Amended) A variable gain circuit comprising:

a variable gain amplifier which receives an input signal outputs an amplified signal, and includes a first field-effect transistor;

a gain control signal compensation circuit which outputs a gain control signal for controlling a gain of said variable gain amplifier and includes a second field-effect transistor;

a gain deviation correction circuit which corrects a gain deviation based on said variable gain amplifier and said gain control signal compensation circuit; and

a gain control signal converter which converts an external gain control signal into an internal gain control signal, said variable gain amplifier including the first field-effect transistor being a first variable gain amplifier, the first gain control signal being a first gain control signal, said gain control signal compensation circuit including the second field-effect transistor being a first gain control signal compensation circuit,

A4 cancld

said gain deviation correction circuit including a second gain control signal compensation circuit and a second variable gain amplifier,

said first gain control signal compensation circuit converting the internal gain control signal into the first gain control signal and inputting the first gain control signal to said first variable gain amplifier to control gain of said first variable gain amplifier, and

said second gain control signal compensation circuit converting the internal gain control signal into the second gain control signal and inputs the second gain control signal to said second variable gain amplifier (201) to control gain of said second variable gain amplifier.

7 8. (Amended) A variable gain circuit comprising:

a variable gain amplifier which receives an input signal, outputs an amplified signal, and includes a first field-effect transistor;

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a gain control signal compensation circuit which outputs a gain control signal for controlling a gain of said variable gain amplifier and includes a second field-effect transistor;

a gain deviation correction circuit which is connected to the variable gain amplifier and corrects a gain deviation based on said variable gain amplifier and said gain control signal compensation circuit;

a gain control signal converter which converts an external gain control signal into an internal gain control signal, said variable gain amplifier including the first field-effect transistor being a first variable gain amplifier, said gain control signal compensation circuit including the second field-effect transistor being a first gain control signal compensation circuit,

said gain deviation correction circuit including a second gain control signal compensation circuit and a second variable gain amplifier,

said first gain control signal compensation circuit converting the internal gain control signal into a first gain control signal,

said second gain control signal compensation circuit converting the first gain control signal into a second gain control signal, and the first gain control signal being input to said first variable gain amplifier to control a gain of said first variable gain amplifier, and the second gain control signal being input to said second variable gain amplifier to control a gain of said second variable gain amplifier.

Please add new Claims 21-23 as follows:

19 ~~21~~. (New) The circuit according to claim ~~3~~ 3, wherein said voltage/current converter unit converts the first gain control signal Vz1 into a current signal Iz1 according to $I_{z1} = q \cdot I_0 - m \cdot V_{z1}^2$, where Iz1 is an output current to be input to said second gain control signal compensation circuit unit, q and m are constants and Io is a current value of a constant current source.

20 ~~22~~. (New) The circuit according to claim ~~11~~ 9, wherein said voltage/current converter unit converts the first gain control signal Vz1 into a current signal Iz1 according to $I_{z1} = q \cdot I_0 - m \cdot V_{z1}^2$, where Iz1 is an output current to be input to said second gain control signal compensation circuit unit, q and m are constants and Io is a current value of a constant current source.

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